CLAIMS AMENDMENTS

Please cancel previously-withdrawn claims 1-65. Please amend claims 66, 70, 82, 83, 96, 97, 108, 109, 120 and 122 as shown below. All other pending claims are unchanged. Please add new claims 131 through 172 as shown below.

1-65. (Cancelled)

66. (amended) A method for cleaning a hot heat-exchange device, comprising the steps of:

introducing at least one explosive material into the hot heat-exchange device and positioning said at least one explosive material to a desired position within the hot heat-exchange device, using a tubular device freely positioned into the hot heat-exchange device;

cooling, using a coolant, said at least one explosive material when introducing said at least one explosive material into the hot heat exchange device, said cooling non-destructively such that when said at least one explosive material is detonated, substantially all explosive impact is provided from said at least one explosive material, using said ~~a~~ coolant cooling said at least one explosive material; and

detonating said at least one explosive material at will.

67. (original) The method of claim 66, further comprising the step of:

introducing said at least one explosive material for cleaning once said coolant commences to cool said at least one explosive material.

68. (original) The method of claim 66, further comprising the

step of:

cooling said at least one explosive material after said at least one explosive material is introduced for cleaning.

69. (original) The method of claim 66, further comprising the step of:

cooling said at least one explosive material while said at least one explosive material is introduced into the hot heat-exchange device.

70. (currently amended) The method of claim 66, further comprising the step of:

cooling said at least one explosive material when said at least one explosive material is at said desired position.

71. (original) The method of claim 66, further comprising the step of:

enveloping said at least one explosive material with said coolant.

72. (original) The method of claim 66, further comprising the step of:

delivering said coolant proximate said at least one explosive material, using a coolant-delivery apparatus.

73. (original) The method of claim 72, further comprising the step of:

omitting any return flow of said coolant.

74. (original) The method of claim 72, further comprising the step of:

delivering said coolant proximate said at least one explosive material through at least one coolant delivery aperture

of said coolant-delivery apparatus.

75. (original) The method of claim 72, further comprising the step of:

maintaining a distance between said coolant-delivery apparatus and said at least one explosive material.

76. (original) The method of claim 74, further comprising the step of:

providing a space between said at least one coolant delivery aperture and said at least one explosive material when said at least one explosive material is at said desired position within said hot heat-exchange device.

77. (original) The method of claim 72, said coolant-delivery apparatus comprising said tubular device, further comprising the step of:

flowing said coolant through at least one passageway of said tubular device.

78. (original) The method of claim 66, further comprising the steps of:

providing an explosive material housing to contain said at least one explosive material; and

cooling said explosive material housing using said coolant.

79. (original) The method of claim 78, further comprising the step of:

introducing said at least one explosive material for cleaning once said coolant commences to cool said at least one explosive material.

80. (original) The method of claim 78, further comprising the

step of:

cooling said at least one explosive material after said at least one explosive material is introduced for cleaning.

81. (original) The method of claim 78, further comprising the step of:

cooling said at least one explosive material while said at least one explosive material is introduced into the hot heat-exchange device.

82. (currently amended) The method of claim 78, further comprising the step of:

cooling said at least one explosive material when said at least one explosive material at said desired position.

83. (currently amended) The method of claim 78, further comprising the step of:÷

enveloping said at least one explosive material with said coolant.

84. (original) The method of claim 78, further comprising the step of:

cooling said explosive material housing using a protective envelope surrounding said explosive material housing with said coolant.

85. (original) The method of claim 84, wherein said protective envelope is semipermeable.

86. (original) The method of claim 78, further comprising the step of:

delivering said coolant proximate said at least one explosive material, using a coolant-delivery apparatus.

87. (original) The method of claim 86, further comprising the step of:

omitting any return flow of said coolant.

88. (original) The method of claim 86, further comprising the step of:

delivering said coolant proximate said at least one explosive material through at least one coolant delivery aperture of said coolant-delivery apparatus.

89. (original) The method of claim 86, further comprising the step of:

maintaining a distance between said coolant-delivery apparatus and said at least one explosive material.

90. (original) The method of claim 88, further comprising the step of:

providing a space between said at least one coolant delivery aperture and said at least one explosive material when said at least one explosive material is at said desired position within said hot heat-exchange device.

91. (original) The method of claim 86, said coolant-delivery apparatus comprising said tubular device, further comprising the step of:

flowing said coolant through at least one passageway of said tubular device.

92. (original) A method for cleaning a hot heat-exchange device, comprising the steps of:

introducing at least one explosive material into the hot heat-exchange device and positioning said at least one explosive

material to a desired position within the hot heat-exchange device, using a tubular device freely positioned into the hot heat-exchange device;

cooling, using a coolant, said at least one explosive material when introducing said at least one explosive material into the hot heat exchange device; and

detonating said at least one explosive material at will.

93. (original) The method of claim 92, further comprising the step of:

introducing said at least one explosive material for cleaning once said coolant commences to cool said at least one explosive material.

94. (original) The method of claim 92, further comprising the step of:

cooling said at least one explosive material after said at least one explosive material is introduced for cleaning.

95. (original) The method of claim 92, further comprising the step of:

cooling said at least one explosive material while said at least one explosive material is introduced into the hot heat-exchange device.

96. (currently amended) The method of claim 92, further comprising the step of:

cooling said at least one explosive material when said at least one explosive material is at said desired position.

97. (currently amended) The method of claim 92, further comprising the step of:

enveloping said at least one explosive material with said coolant.

98. (original) The method of claim 92, further comprising the step of:

delivering said coolant proximate said at least one explosive material, using a coolant-delivery apparatus.

99. (original) The method of claim 98, further comprising the step of:

omitting any return flow of said coolant.

100. (original) The method of claim 98, further comprising the step of:

delivering said coolant proximate said at least one explosive material through at least one coolant delivery aperture of said coolant-delivery apparatus.

101. (original) The method of claim 98, further comprising the step of:

maintaining a distance between said coolant-delivery apparatus and said at least one explosive material.

102. (original) The method of claim 100, further comprising the step of:

providing a space between said at least one coolant delivery aperture and said at least one explosive material when said at least one explosive material is at said desired position within said hot heat-exchange device.

103. (original) The method of claim 98, said coolant-delivery apparatus comprising said tubular device, further comprising the step of:

flowing said coolant through at least one passageway of said tubular device.

104. (original) The method of claim 92, further comprising the steps of:

providing an explosive material housing to contain said at least one explosive material; and

cooling said explosive material housing using said coolant.

105. (original) The method of claim 104, further comprising the step of:

introducing said at least one explosive material for cleaning once said coolant commences to cool said at least one explosive material.

106. (original) The method of claim 104, further comprising the step of:

cooling said at least one explosive material after said at least one explosive material is introduced for cleaning.

107. (original) The method of claim 104, further comprising the step of:

cooling said at least one explosive material while said at least one explosive material is introduced into the hot heat-exchange device.

108. (currently amended) The method of claim 104, further comprising the step of:

cooling said at least one explosive material when said at least one explosive material at said desired position.

109. (currently amended) The method of claim 104, further comprising the step of:÷

enveloping said at least one explosive material with said coolant.

110. (original) The method of claim 104, further comprising the step of:

cooling said explosive material housing using a protective envelope surrounding said explosive material housing with said coolant.

111. (original) The method of claim 110, wherein said protective envelope is semipermeable.

112. (original) The method of claim 104, further comprising the step of:

delivering said coolant proximate said at least one explosive material, using a coolant-delivery apparatus.

113. (original) The method of claim 112, further comprising the step of:

omitting any return flow of said coolant.

114. (original) The method of claim 112, further comprising the step of:

delivering said coolant proximate said at least one explosive material through at least one coolant delivery aperture of said coolant-delivery apparatus.

115. (original) The method of claim 112, further comprising the step of:

maintaining a distance between said coolant-delivery apparatus and said at least one explosive material.

116. (original) The method of claim 114, further comprising the step of:

providing a space between said at least one coolant delivery aperture and said at least one explosive material when said at least one explosive material is at said desired position within said hot heat-exchange device.

117. (original) The method of claim 112, said coolant-delivery apparatus comprising said tubular device, further comprising the step of:

flowing said coolant through at least one passageway of said tubular device.

118. (original) A method for cleaning a hot heat-exchange device, comprising:

introducing at least one explosive material into the hot heat-exchange device and positioning said at least one explosive material to a desired position within the hot heat-exchange device, using a tubular device freely positioned into the hot heat-exchange device;

cooling, using a coolant, said tubular device when introducing said at least one explosive material into the hot heat-exchange device; and

detonating said at least one explosive material at will.

119. (currently amended) The method of claim 118, further comprising the step of:

introducing said at least one explosive material for cleaning once said coolant commences to cool said tubular device.

120. (currently amended) The method of claim 118, further comprising the step of:~~:~~

cooling said tubular device after said at least one

explosive material is introduced for cleaning.

121. (original) The method of claim 118, further comprising the step of:

cooling said tubular device while said at least one explosive material is introduced into the hot heat-exchange device.

122. (currently amended) The method of claim 118, further comprising the step of:

cooling said at least one explosive material when said at least one explosive material at said desired position.

123. (original) The method of claim 118, further comprising the step of:

cooling said tubular device by flowing said coolant through at least one passageway of said tubular device.

124. (original) The method of claim 118, further comprising the step of:

omitting any return flow of said coolant.

125. (original) The method of claim 118, further comprising the step of:

delivering at least some coolant proximate said at least one explosive material through at least one coolant delivery aperture of said tubular device.

126. (original) The method of claim 118, further comprising the step of:

maintaining a distance between said tubular device and said at least one explosive material.

127. (original) The method of claim 125, further comprising the

step of:

providing a space between said at least one coolant delivery aperture and said at least one explosive material when said at least one explosive material is at said desired position within said hot heat-exchange device.

128. (original) A method for cleaning a hot heat-exchange device, comprising the steps of:

introducing at least one explosive material into the hot heat-exchange device and positioning said at least one explosive material to a desired position within the hot heat-exchange device, via a tubular device freely positioned into the hot heat-exchange device;

cooling, using a coolant, said at least one explosive material when introducing said at least one explosive material into the hot heat exchange device;

delivering said coolant proximate said at least one explosive material by flowing said coolant through at least one tubular passageway of a coolant-delivery apparatus; and

detonating said at least one explosive material at will.

129. (original) A method for cleaning a hot heat-exchange device, comprising the steps of:

providing an explosive material housing to contain said at least one explosive material;

cooling, using a coolant, said at least one explosive material when introducing said at least one explosive material into the hot heat exchange device;

surrounding said explosive material housing with said

coolant, using a protective envelope;

introducing at least one explosive material into the hot heat-exchange device and positioning said at least one explosive material to a desired position within the hot heat-exchange device, via a tubular device freely positioned into the hot heat-exchange device;

detonating said at least one explosive material at will.

130. (amended) A method for cleaning a hot heat-exchange device, comprising the steps of:

introducing at least one explosive material into the hot heat-exchange device and positioning said at least one explosive material to a desired position within the hot heat-exchange device, via a tubular device freely positioned into the hot heat-exchange device;

delivering said at least some coolant proximate said at least one explosive material, by flowing at least some coolant through at least one passageway of a coolant-delivery apparatus;

cooling said at least one explosive material while said at least one explosive material is introduced into the hot heat-exchange device, by enveloping said at least one explosive material with said at least some coolant; and

detonating said at least one explosive material at will.

131. (new) The method of claim 66, wherein the step of using a tubular device freely positioned into the hot heat-exchange device comprises using a tubular device freely positioned through an open space of said hot heat-exchange device.

132. (new) The method of claim 92, wherein the step of using a

tubular device freely positioned into the hot heat-exchange device comprises using a tubular device freely positioned through an open space of said hot heat-exchange device.

133. (new) The method of claim 118, wherein the step of using a tubular device freely positioned into the hot heat-exchange device comprises using a tubular device freely positioned through an open space of said hot heat-exchange device.

134. (new) The method of claim 128, wherein the step of using a tubular device freely positioned into the hot heat-exchange device comprises using a tubular device freely positioned through an open space of said hot heat-exchange device.

135. (new) The method of claim 129, wherein the step of using a tubular device freely positioned into the hot heat-exchange device comprises using a tubular device freely positioned through an open space of said hot heat-exchange device.

136. (new) The method of claim 130, wherein the step of using a tubular device freely positioned into the hot heat-exchange device comprises using a tubular device freely positioned through an open space of said hot heat-exchange device.

137. (new) A method for cleaning a hot heat-exchange device, comprising the steps of:

introducing at least one explosive material into the hot heat-exchange device and providing said at least one explosive material to a desired position within the hot heat-exchange device, using a cleaning delivery assembly proximate a first end of a tubular device, including placing said cleaning delivery assembly into said hot heat-exchange device through an entry port

of said hot heat-exchange device and then applying force to part of said tubular device outside of said hot heat-exchange device, to position said cleaning delivery assembly to said desired position;

cooling, using a coolant, said at least one explosive material in connection with introducing said at least one explosive material into the hot heat exchange device, such that when said at least one explosive material is detonated, shock waves from the detonation cause slag to be separated from a region of said hot heat-exchange device without damaging said hot heat-exchange device; and

detonating said at least one explosive material at will.

138. (new) The method of claim 137, further comprising the step of:

introducing said at least one explosive material for cleaning once said coolant commences to cool said at least one explosive material.

139. (new) The method of claim 137, further comprising the step of:

cooling said at least one explosive material after said at least one explosive material is introduced for cleaning.

140. (new) The method of claim 137, further comprising the step of:

cooling said at least one explosive material while said at least one explosive material is introduced into the hot heat-exchange device.

141. (new) The method of claim 137, further comprising the step

of:

cooling said at least one explosive material when said at least one explosive material is at said desired position.

142. (new) The method of claim 137, wherein said step of cooling comprises enveloping said at least one explosive material with said coolant.

143. (new) The method of claim 137, wherein said step of cooling comprises delivering said coolant proximate said at least one explosive material through at least one coolant delivery aperture of a coolant-delivery apparatus.

144. (new) The method of claim 137, wherein said step of cooling comprises flowing said coolant through at least one passageway of said tubular device.

145. (new) The method of claim 137, further comprising the steps of:

providing an explosive material housing to contain said at least one explosive material; and

cooling said explosive material housing using said coolant.

146. (new) The method of claim 145, wherein said step of cooling comprises enveloping said at least one explosive material with said coolant.

147. (new) The method of claim 145, further comprising the step of:

enveloping said explosive material housing with said coolant.

148. (new) The method of claim 145, further comprising the step of:

cooling said explosive material housing using a protective envelope surrounding said explosive material housing with said coolant.

149. (new) The method of claim 148, wherein said protective envelope is semipermeable.

150. (new) A method for cleaning a hot heat-exchange device, comprising the steps of:

introducing at least one explosive material into the hot heat-exchange device and providing said at least one explosive material to a desired position within the hot heat-exchange device, using a cleaning delivery assembly proximate a first end of a tubular device, including placing said cleaning delivery assembly into said hot heat-exchange device through an entry port of said hot heat-exchange device and then applying force to part of said tubular device outside of said hot heat-exchange device, to position said cleaning delivery assembly to said desired position;

cooling, using a coolant, said at least one explosive material in connection with introducing said at least one explosive material into the hot heat exchange device; and

detonating said at least one explosive material at will.

151. (new) The method of claim 150, further comprising the step of:

introducing said at least one explosive material for cleaning once said coolant commences to cool said at least one explosive material.

152. (new) The method of claim 150, further comprising the step

of:

cooling said at least one explosive material after said at least one explosive material is introduced for cleaning.

153. (new) The method of claim 150, further comprising the step of:

cooling said at least one explosive material while said at least one explosive material is introduced into the hot heat-exchange device.

154. (new) The method of claim 150, further comprising the step of:

cooling said at least one explosive material when said at least one explosive material is at said desired position.

155. (new) The method of claim 150, wherein said step of cooling comprises enveloping said at least one explosive material with said coolant.

156. (new) The method of claim 150, wherein said step of cooling comprises delivering said coolant proximate said at least one explosive material through at least one coolant delivery aperture of a coolant-delivery apparatus.

157. (new) The method of claim 150, wherein said step of cooling comprises flowing said coolant through at least one passageway of said tubular device.

158. (new) The method of claim 150, further comprising the steps of:

providing an explosive material housing to contain said at least one explosive material; and

cooling said explosive material housing using said coolant.

159. (new) The method of claim 158, further comprising the step of:

enveloping said at least one explosive material with said coolant.

160. (new) The method of claim 158, further comprising the step of:

enveloping said explosive material housing with said coolant.

161. (new) The method of claim 158, further comprising the step of:

cooling said explosive material housing using a protective envelope surrounding said explosive material housing with said coolant.

162. (new) The method of claim 161, wherein said protective envelope is semipermeable.

163. (new) A method for cleaning a hot heat-exchange device, comprising:

introducing at least one explosive material into the hot heat-exchange device and providing said at least one explosive material to a desired position within the hot heat-exchange device, using a cleaning delivery assembly proximate a first end of a tubular device, including placing said cleaning delivery assembly into said hot heat-exchange device through an entry port of said hot heat-exchange device and then applying force to part of said tubular device outside of said hot heat-exchange device, to position said cleaning delivery assembly to said desired position;

cooling, using a coolant, said tubular device in connection with introducing said at least one explosive material into the hot heat-exchange device; and

detonating said at least one explosive material at will.

164. (new) The method of claim 163, further comprising the step of:

introducing said at least one explosive material for cleaning once said coolant commences to cool said tubular device.

165. (new) The method of claim 163, further comprising the step of:

cooling said tubular device after said at least one explosive material is introduced for cleaning.

166. (new) The method of claim 163, further comprising the step of:

cooling said tubular device while said at least one explosive material is introduced into the hot heat-exchange device.

167. (new) The method of claim 163, further comprising the step of:

cooling said at least one explosive material when said at least one explosive material at said desired position.

168. (new) The method of claim 163, wherein said step of cooling comprises cooling said tubular device by flowing said coolant through at least one passageway of said tubular device.

169. (new) The method of claim 163, wherein said step of cooling comprises delivering at least some coolant proximate said at least one explosive material through at least one coolant

delivery aperture of said tubular device.

170. (new) A method for cleaning a hot heat-exchange device, comprising the steps of:

placing a cleaning delivery assembly proximate a first end of a tubular device into said hot heat-exchange device through an entry port of said heat-exchange device and then applying force to part of said tubular device outside of said hot heat-exchange device, to position said cleaning delivery assembly to a desired position within the hot heat-exchange device;

introducing at least one material for explosive into the hot heat-exchange device and positioning said at least one material for explosive to said desired position via said tubular device;

cooling, using a coolant, said at least one material for explosive when introducing said at least one material for explosive into the hot heat exchange device;

delivering said coolant proximate said at least one material for explosive by flowing said coolant through at least one tubular passageway of a coolant-delivery apparatus; and

detonating said at least one material for explosive at will.

171. (new) A method for cleaning a hot heat-exchange device, comprising the steps of:

placing a cleaning delivery assembly proximate a first end of a tubular device into said hot heat-exchange device through an entry port of said heat-exchange device and then applying force to part of said tubular device outside of said hot heat-exchange device, to position said cleaning delivery assembly to a desired position within the hot heat-exchange device;

providing an explosive material housing to contain at least one material for explosive;

cooling, using a coolant, said at least one material for explosive when introducing said at least one material for explosive into the hot heat exchange device;

surrounding said at least one explosive material housing with said coolant, using a protective envelope;

introducing said at least one material for explosive into the hot heat-exchange device and positioning said at least one material for explosive to said desired position via said tubular device; and

detonating said at least one material for explosive at will.

172. (new) A method for cleaning a hot heat-exchange device, comprising the steps of:

placing a cleaning delivery assembly proximate a first end of a tubular device into an interior of said hot heat-exchange device through an entry port of said heat-exchange device and then applying force to part of said tubular device outside of said hot heat-exchange device, to position said cleaning delivery assembly to a desired position within the hot heat-exchange device;

introducing at least one material for explosive into the hot heat-exchange device and positioning said at least one material for explosive to said desired position via said tubular device;

delivering said at least some coolant proximate said at least one material for explosive, by flowing at least some coolant through at least one passageway of a coolant-delivery

apparatus;

cooling said at least one material for explosive while said at least one material for explosive is introduced into the hot heat-exchange device, by enveloping said at least one material for explosive with at least some coolant; and

detonating said at least one material for explosive at will.